



## Factors Influencing the Management of Chronic Orofacial Pain and Headache

Several recently published books and a number of recent meetings, one of which is the subject of the Meeting Review in this issue, have highlighted the complexity of chronic orofacial pain and headache conditions and the challenges they present to clinicians for diagnosis and treatment of these conditions; this complexity and the clinical challenges are also evident from articles in this issue of the journal.<sup>1,2</sup> The factors that bear on the success (or not) of the management approaches used for the conditions can also be gleaned from the material presented in these books and meetings. In view of their importance to clinical practice, I have summarized several of these factors below.

One important influence on the diagnosis and treatment of chronic orofacial pain and headache conditions is the uncertainty that exists about the etiology and pathogenesis, and the management, of the vast majority of these conditions. We do know, in terms of pathogenesis, that neuroplastic changes occur in the central nervous system (CNS) in pain conditions and are associated with nociceptive neuronal hyperexcitability (central sensitization) as well as changes in the CNS circuits underlying the psychosocial functioning of the patient. These changes may gradually become maintained over time unless the pain condition is managed effectively in its early stages. If not, an entrenched condition may result that becomes even more difficult to manage. But effective management may not be straightforward for some patients because many of the numerous diagnostic and treatment approaches advocated for chronic orofacial pain and headache conditions lack a solid scientific underpinning and have muddled further our understanding of their management.<sup>3-5</sup>

Diagnosis and treatment are also complicated by the complex nature of pain itself and its multidimensional character, encompassing sensory-discriminative, cognitive-evaluative, and affective-motivational dimensions. These factors especially come into play in chronic pain states, where they can impact the emotional and psychosocial well-being and quality of life of the patient. In addition, there are differences between individuals in these dimensions, which may be reflected in individual differences in the degree of manifestation of a chronic pain condition and in the response to treatment. Furthermore, tolerance and even addiction to some therapeutic approaches (eg, narcotic analgesics) may develop in some individuals, especially those who may be genetically prone.

These individual differences thus can complicate chronic pain management and make it difficult to standardize diagnostic and therapeutic approaches.

The multiple sensory and motor functions that characterize the orofacial region and the special meaning that the orofacial region has for humans and indeed most animals are factors that can also make it difficult to manage effectively chronic pain in this region. We utilize this region of the body for sensory and motor functions that are normally pleasurable and vital for sustaining life (eg, taste, chewing, swallowing) or that allow for communication with others through facial gestures and speech. Some chronic pain patients may experience difficulties in these functions; the taste impairment of many burning mouth patients and the jaw movement limitations of patients with temporomandibular disorders (TMD) are prime examples. Therefore, comprehensive management is needed to ensure that these sensorimotor problems that may be associated with the chronic pain are also dealt with appropriately.

A further complication arises from the variety of comorbidities that are associated with many orofacial pain and headache conditions. Comorbid "psychological" conditions (eg, anxiety, depression, catastrophizing) and disturbed sleep are common in patients with chronic orofacial pain or headache. In addition, more than one pain may be manifested in the same patient. For example, signs or symptoms of TMD and headache may be manifested together, and in addition patients with one or both of these conditions may have a high incidence of pain in other body regions, eg, arthritis pain, back pain, fibromyalgia, irritable bowel. Many clinicians have limited knowledge, training, and expertise for not only managing successfully chronic pain per se but also for recognizing the various comorbidities that may accompany a chronic pain state in the orofacial region and in understanding the processes involved in them.

Which brings me to the final group of factors that influence diagnosis and treatment of chronic pain conditions, namely research, education, and knowledge translation. The diagnosis and treatment of chronic orofacial pain and headache in many patients will remain challenging until research in humans and animal models elucidates the mechanisms underlying the etiology and pathogenesis of these conditions and their comorbidities and also provides new or improved assessment and therapeutic approaches that have a research base of strong evidence to support

their use. This new knowledge needs to be synthesized and passed on effectively to clinicians and applied by them in the management of these conditions. Increased emphasis on research and on education linked to knowledge translation is integral to improving diagnostic and therapeutic approaches, for the benefit of the patient with a chronic orofacial pain or headache condition.



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## References

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